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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Ehud Gal

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07/14/2010

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EXAMINER

THOMPSON, TIMOTHY J

ART UNIT

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2873

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,632	Applicant(s) GAL ET AL.	
	Examiner Timothy J. Thompson	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10, 12-14, 18, 19, 21-23, 26, 34 and 35 is/are rejected.
- 7) ☒ Claim(s) 6-9, 11, 15-17, 20, 24, 25, 27-33 and 36-46 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/06; 07/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 10, 12-14, 18, 19, 21, 22, 34, 35 are rejected under 35

U.S.C. 102(b) as being anticipated by Powell(U.S. Patent No. 5,473,474).

Regarding claim 1, Powell discloses a transparent circumferential surface, circumferentially extending about said axis of symmetry(fig 6, 14), said transparent surface having optical power(col 5, line 64 to col 6, line 10) in planes which include said axis of symmetry(fig 6); a first reflective surface(fig 6, 16), symmetric with respect to said axis of symmetry and being operative to reflect light passing through said transparent surface(fig 6); and a second reflective surface, symmetric with respect to said axis of symmetry and axially spaced from said transparent surface and being operative to reflect light reflected by said first reflective surface(fig 6, 18).

Regarding claim 2, Powell discloses wherein said lens is formed of at least one of glass and plastic(col 5, lines 64-67).

Regarding claim 3, Powell discloses wherein said transparent circumferential surface receives light from a 360-degree field of view about said axis of symmetry(col 1, lines 45-49).

Regarding claim 4, Powell discloses wherein said first transparent circumferential surface is transparent to radiation at a specific range of wavelengths(fig 6).

Regarding claim 5, Powell discloses wherein said transparent circumferential surface is operative to refract light onto said first reflective surface(fig 6).

Regarding claim 10, Powell discloses wherein at least one of said first and second reflective surfaces is a convex reflective surface(fig 6, 18).

Regarding claim 12, Powell discloses and wherein said second reflective surface directs light generally along said axis of symmetry(fig 6).

Regarding claim 13, Powell discloses wherein at least one of said first and second reflective surfaces is annular(fig 6).

Regarding claim 14, Powell discloses wherein each of said first and second reflective surfaces is annular(fig 6).

Regarding claim 18, Powell discloses wherein said first reflective surface also comprises a central area which has a transparent surface and which is symmetric with respect to said axis of symmetry(Fig 6, 20).

Regarding claim 19, Powell discloses wherein said central area has a curvature which is different than a curvature of said first reflective surface(fig 6, 20).

Regarding claim 21, Powell discloses wherein said specific range of wavelengths includes visible wavelengths(col 2, lines 40-45).

Regarding claim 22, Powell discloses wherein said specific range of wavelengths includes infrared wavelengths(col 6, lines 13-20).

Regarding claim 34, Powell discloses wherein light passing through said lens is directed onto an imaging element (col 4, lines 55-60).

Regarding claim 35, Powell discloses wherein said imaging element comprises a CCD array(col 4, lines 55-60).

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al.(U.S. Patent No. 6,801,492).

Regarding claim 1, Lee et al. discloses a transparent circumferential surface, circumferentially extending about said axis of symmetry(fig 5, 51b), said transparent surface having optical power(col 4, lines 57-65, since the surface is concave it will have an optical power) in planes which include said axis of symmetry(fig 5); a first reflective surface(fig 5, 55), symmetric with respect to said axis of symmetry and being operative to reflect light passing through said transparent surface(fig 5); and a second reflective surface, symmetric with respect to said axis of symmetry and axially spaced from said transparent surface and being operative to reflect light reflected by said first reflective surface(fig 5, 57).

Claim 1, 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Tseng(U.S. Patent No. 6,684,034).

Regarding claim 1, Tseng discloses a transparent circumferential surface, circumferentially extending about said axis of symmetry(fig 5, 10), said transparent surface having optical power(col 3, lines 5-10) in planes which include said axis of

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symmetry(fig 5); a first reflective surface(fig 5, C), symmetric with respect to said axis of symmetry and being operative to reflect light passing through said transparent surface(fig 5); and a second reflective surface, symmetric with respect to said axis of symmetry and axially spaced from said transparent surface and being operative to reflect light reflected by said first reflective surface(fig 5, D).

Regarding claim 23, Tseng discloses at least one additional lens arranged to direct light axially through said lens(fig 1, 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (U.S. Patent No. 6,801,492) as applied to claim 1 above and further in view of Tseng.(U.S. Patent No. 6,684,034).

Regarding claim 23, Lee et al. does not specifically disclose at least one additional lens arranged to direct light axially through said lens. However, Lee et al. does disclose a lens being integral with the main lens body for directing light axially through said lens(fig 5, 51a). It would have been obvious to one having ordinary skill in

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the art to form the reflective lens and an additional lens for directing light axially through said lens since it has been held that constructing a formerly integral structure into various elements involves only routine skill in the art *Nerwin vs. Erlichman*, 168 USPQ 177, 179. Additionally it would have been obvious to form the lens into two parts as shown by Tseng.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell(U.S. Patent No. 5,473,474)as applied to claim 1 above and further in view of Shigematsu(U.S. Patent No. 6,259,508).

Regarding claim 26, Powell does not disclose at least one aberration correcting lens arranged to correct aberrations of light passing through said lens. However, Shigematsu discloses at least one aberration correcting lens arranged to correct aberrations of light passing through said lens (claim 21). It would have been obvious to one having ordinary skill in the art to have at least one aberration correcting lens arranged to correct aberrations of light passing through said lens as shown by Shigematsu, with the lens system of Powell, since as shown by Shigematsu having at least one aberration correcting lens arranged to correct aberrations of light passing through said lens is commonly used for correcting aberrations.

Allowable Subject Matter

Claims 6-9, 11, 15-17, 20, 24, 25, 27-33, 36-46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Thompson whose telephone number is (571) 272-2342. The examiner can normally be reached on 8:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mack Ricky can be reached on (571) 272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Timothy J Thompson/

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26. (Currently Amended) A lens according to ~~any of the preceding claims~~ 1 and also comprising at least one aberration correcting lens arranged to correct aberrations of light passing through said lens.